CHAPTER 6: FINDINGS AND RECOMMENDATIONS

General Findings

The main questions for our evaluation, as specified in the enabling legislation and in our contract with the California Department of Education (CDE), concern the impact on students of the new graduation requirement. Specifically, we were asked to look at changes in graduation and dropout rates and in other important student outcomes, such as college attendance rates for all students and for specified subpopulations of students. Because the Class of 2004, the first class affected by the CAHSEE requirement, still has two more years until graduation, it is too soon to assess with any certainty the impact CAHSEE will have on graduation rates or post-high-school activities. Our first general finding is thus mostly a non-finding. Specifically:

General Finding 1. Available evidence suggests that the CAHSEE has not yet had any impact on retention, dropout rates, or expectations for graduation and post-high-school plans.

This finding is based on the following evidence. First, the enrollment drop from 9th to 10th grade for the Class of 2004 was no different from 9th to 10th grade enrollment drops for prior high school classes (see Table 3.1). Second, for students tested in both 2001 and March 2002, the percentage who expected to graduate from high school actually increased, from 73 percent to 78 percent for students repeating ELA and from 80 percent to 85 percent for students repeating mathematics (Figures 4.5 and 4.6). There is no reason to believe that graduation rates would drop for students who passed the CAHSEE on their first try as 9th graders; it is the repeat test takers who are at greatest risk of being denied a diploma and therefore contributing to decreased graduation rates.

A final outcome of key interest is college attendance. As shown in Figures 4.9 and 4.10, the percent of repeaters who expect to attend a community college increased by about 6 percent while the percent expecting to go right away to a 4-year college dropped by about the same amount. We do not have comparative figures for other years. This could be a normal change between the 9th and 10th grade as students adopt more realistic expectations based on their level of success during the first year of high school. In any event, the percent of repeat test takers expecting to go to some form of college did not change at all from 2001 to 2002.

To this point, the evaluation has focused on the development of the exam and on what schools and districts are doing to help students meet the new requirement. In our earlier reports, we expressed concern with the timeline for implementing the new graduation requirement. Our concern was based on two key questions:

(1) Would the exam be ready for the students?

(2) Would students be ready for the exam?

The first question was asked with regard to the risk of problems in the assembling and printing of test forms, with the administration of the test, and with the reporting of results. In

our report to the legislature earlier this year (Wise et al., 2002), we concluded that there were no significant problems with the 2001 administrations. Based on our review of the March 2002 CAHSEE, our second general finding is:

General Finding 2: Progress in developing the exam continues to be noteworthy. We found no significant problems with the development, administration or scoring of the March 2002 exam.

Award of the contract for development, administration, and reporting of the CAHSEE was delayed significantly due to protests. What was planned as a 9-month timeline to prepare for the March 2002 administration was cut in half. Nonetheless, test forms were assembled and reviewed, instructions were sent to districts, most districts completed a "pre-ID" process of signing up their students, and the test was administered as scheduled. There were no reports of students being denied the opportunity to take the exam. As noted in Chapter 2, the 3-day administration seemed to significantly improve the logistics of test administration. One major improvement over the 2001 administration was that scores for students tested in March 2002 were reported prior to the end of the school year.

There are, of course, continuing opportunities for improving the processes for development, administration, scoring, and reporting of the CAHSEE. ETS introduced changes "automating" some parts of the pre-ID process that some schools had trouble using. Our reviews of test questions led to a number of suggestions for improvements, even in questions that were used with the March 2002 administration. These suggestions are being passed on to the test developer along with similar suggestions for improving the training and monitoring of essay scorers. ETS introduced significant changes to the process for scoring essays that, with further improvement to monitoring procedures, might lead to even higher consistency. Overall, score accuracy continues to be acceptable, with very few potential errors in classifying students who are, in fact, significantly below or above the minimum passing level.

General Finding 3: Students made significant progress in mastering the required ELA skills, but less progress in mathematics.

In the 2001 administrations, roughly one third of the students who took the ELA exam did not pass. Of the students who did not pass on the first try and took the exam again in March 2002, 42 percent have now met the CAHSEE ELA requirement. With continued implementation and improvement of programs targeted to the remaining students, it is reasonable to expect that most students will meet the ELA requirement by the time they complete the 12th grade.

For mathematics, progress is less evident. Only one fourth of the students who did not pass in 2001 and retook the mathematics exam in March 2002 passed on their second try. Nearly half of the repeat test takers were taking, but had not completed, algebra, and only 22 percent of these students passed the mathematics portion of the CAHSEE (see Table 3.4). Another fourth were still taking preparatory courses (pre-algebra or general math) and their passing rates were even lower. It is too soon to estimate how many of these students will

eventually reach higher-level courses. Students who took the higher-level courses consistently had higher passing rates.

General Finding 4: For disadvantaged students, initial passing rates continued to be low and progress for repeat test takers was limited.

As shown in Tables 3.2 and 3.3, passing rates for economically disadvantaged students (based on school lunch program eligibility), English learners, and students in special education programs continue to be lower than for other groups of students. Initial passing rates for Hispanic and African American students are also lower, although ELA passing rates for repeat test takers who are Hispanic or African American were nearly as high as for other students. Passing rates in mathematics for repeat test takers who were African American were significantly lower than for other groups.

One hopeful sign for English learners is that passing rates for students who were redesignated as fluent English proficient were higher than for nearly all other groups. Because of problems with coding the English fluency variable in 2001, we cannot accurately estimate the proportion of students who have been redesignated in the past year. It would be useful if scores on the California English Language Development Test (CELDT) were available for students who repeated the CAHSEE so that the relationship of English proficiency to CAHSEE passing levels can be examined more fully.

Passing rates for both first-time test takers and repeat test takers were lowest for students with disabilities (and/or enrolled in special education programs). Lower 2001 scores for the repeat test takers suggest that these students may need more work on foundational as well as targeted skills. It is also likely that more time may be needed to adjust Individualized Education Programs (IEPs) or Section 504 Plans based on initial CAHSEE results, which were not available until fall 2001. Unless there are dramatic improvements for these students over the next two years, a substantial number will not be able to pass the CAHSEE and receive a high school diploma.

General Finding 5: Teachers and principals remain positive about the CAHSEE's impact on instruction. More of them now expect positive impact on student motivation and parental involvement.

Figure 5.9 and Table 5.17 show teacher and principal predictions that the CAHSEE will, over time, lead to improved instructional practices. An increasing proportion of teachers responding to our surveys expected a positive impact on student motivation prior to their taking the CAHSEE for the first time (Table 5.15). This proportion grew from 26 percent in the 2000 survey to 46 percent in the 2001 survey and 66 percent in the 2002 survey. In the 2000 survey, 33 percent of teachers believed motivation for students who did not initially pass would increase while 30 percent believed it would be decreased. Now that some students have received results, teachers have a more positive expectation, with 48 percent expecting increased motivation compared to 21 percent who expect decreased motivation for students who do not pass on the first try. Expectations are even higher for a positive impact of the CAHSEE on parental involvement for students who do not pass on the first try. Most

teachers believe the CAHSEE will have little impact on motivation or parental involvement for students who pass it on the first try.

General Finding 6: Teachers and principals report planning and/or implementing a number of constructive programs for helping students master the skills covered by the CAHSEE.

An increased number of principals and teachers reported undertaking specific activities in preparation for the CAHSEE (Figure 5.1). Most types of preparation reported by an increased number of principals were clearly positive responses. These included adopting state content standards, using school results to change instruction, modifying the curriculum, designing remedial instruction, changing graduation requirements, increasing summer school courses, and even adding homework. One or two other areas of increased activity—simply encouraging students to work hard and teaching test-taking skills—are less clearly positive, but unlikely to be harmful. An increased number of teachers reported undertaking similar positive activities, including increased attention to content standards, providing individual or group tutoring, designing remedial instruction, administering "early warning" tests, adding homework, and talking with parents. At the same time, the percent of teachers reporting no activities to prepare students dropped significantly (from 20 percent down to about 11 percent) in the 2002 survey.

Recommendations

Based on information available to date, as summarized in our six general findings, we offer two main recommendations at this time:

General Recommendation 1: Schools need to focus attention on effective ways of helping students master the required skills in mathematics. CDE might consider a "what works" effort with respect to remedial programs, and disseminating information about effective programs and practices.

Initial passing rates for the mathematics portion of the CAHSEE were low. Fewer than half of those taking the test as 9th graders passed. Passing rates for those testing for the first time in March 2002 were equally low, and only one quarter of the repeat test takers in March 2002 passed on their second try. Unless more dramatic progress is made over the next two years, a significant number of students in the Class of 2004 may not pass the mathematics test and will be denied a diploma.

For both 2001 and March 2002, passing rates for math were closely related to math courses taken. However, simply getting students to take algebra may not be sufficient if they have not first mastered foundational skills. In 2001, 49 percent of the students enrolled in algebra as 9th graders passed (Wise et al., 2002, page 84). The passing rate for students who completed algebra in the 8th grade was higher, even if they were not enrolled in further math courses (61 percent for students completing algebra but not enrolled in geometry). In contrast, the passing rate for first-time test takers in March 2002 who were enrolled in or had completed algebra by the 10th grade was only 30 percent. Schools need remedial programs that do more than simply encourage students to take algebra.

While the state already has a number of programs designed to help schools teach the California content standards, there is still considerable variation across schools in mathematics passing rates (Table 3.8). Identification and dissemination of effective practices in schools with higher passing rates might be a significant aid to schools with lower passing rates.

General Recommendation 2: State policymakers need to engage in a discussion about reasonable options for students with disabilities who may not ever be likely to pass the test.

There is significant tension between the desire to have high expectations for all students, including students with disabilities, and the need to be realistic about what some students can accomplish. Initial and continuing low passing rates for students with disabilities suggest particular concern with the time it may take to help these students master the required standards.

Options to be considered include some form of alternative diploma for students who are physically or mentally unable to develop or demonstrate the required skills, alternate means of demonstrating competency for students who cannot meaningfully complete the CAHSEE, even with accommodation, and new work on special remedial courses targeted specifically to this population.

One final option for further discussion is deferring the CAHSEE requirement one or more years to give more time for students to update educational plans to cover not only the CAHSEE content areas, but all of the prerequisite or foundational skills as well. Last year, the California legislature passed a bill (AB-1609) calling for a study of whether standards-based instruction is sufficient to support the use of the CAHSEE for the Class of 2004 and authorizing the State Board of Education to decide, after reviewing this report (and also reviewing testing results through March 2003), whether the CAHSEE requirement should be deferred. It is likely that progress or lack of progress for students with disabilities will be a key concern in the required study and in the Board's decision.

Other Specific Recommendations

Based on activities and findings from the first three years of the evaluation, we offer a number of other, more specific recommendations for improving the quality of the exam. These include:

Specific Recommendation 1: The score scale needs to be changed for students scoring below 300 (chance levels). A short-term solution is to simply recode scores below 300 to 299. Teachers, students, and parents need to be cautioned against interpreting differences below the 300 level.

Our analysis indicates that the CAHSEE tests are acceptably accurate in determining whether students meet the achievement requirements. However, as indicated in Chapter 3 above (see Tables 3.12 and 3.13), CAHSEE scores do not provide meaningful distinctions for students scoring below chance levels (about 300 on the current score scale). There is a danger

that students, parents, and teachers could incorrectly interpret a gain below the 300 level as an indicator of significant progress when it is not.

At some point in the future, when the passing level or the content standards covered by the CAHSEE are revised, it might be useful to rethink the scale on which results are reported. Analyses of all of the ways CAHSEE scores are being interpreted and used would help design changes to strengthen appropriate interpretations and reduce the potential for inappropriate uses and interpretations. For the Class of 2004, however, there is also value in keeping the current scale to allow some indication of progress toward passing levels. For the interim, we recommend recoding all scores below about 300 to 299 to discourage inappropriate interpretations of score differences below that level.

Specific Recommendation 2: Districts and schools should be asked to supply more complete information on who has taken, is taking, and still needs to take the CAHSEE.

In the current analyses, we had to rely on student's self-reports of whether they took the CAHSEE in the 9th grade and, if so, whether they passed. Our comparison of these reports to results from actually matching up test results across the two years indicates that the self-reports are generally, but not completely accurate. In addition, a significant number of students failed to complete this information or responded (quite legitimately) that they did not know or remember.

Clearer information on who has and has not taken each section of the CAHSEE would be helpful to CDE and the SBE in making informed policy and guidelines for CAHSEE administration and use. For example, knowing why some students fail to take some or all of the CAHSEE would help in deciding how student absences should be treated. In addition, some districts might benefit from increased requirements to report more detailed information on students who have or have not passed part or all of the CAHSEE. Such a requirement might reduce the chances of particular students being overlooked and missing a needed opportunity to take the CAHSEE.

As suggested in earlier evaluation reports, there would be many advantages to a statewide student data system where schools, districts, and the state could share information about student status and progress. The pre-ID process is evolving to the point where, at least for larger districts, existing electronic records can be used in registering students to take the CAHSEE. Interim systems for sharing information on CAHSEE results for individual students could be valuable until a more comprehensive student data system is adopted.

Specific Recommendation 3: The CDE should work with schools to collect more information on documentation of student needs for accommodations or modifications.

Guidelines and procedures concerning testing accommodations and modifications were much more carefully developed and disseminated for the 2002 CAHSEE administration than in the prior year, when it was believed up until the last minute that only a practice test would be administered. The SBE reviewed and adopted policies for testing accommodations and

the CDE provided guidance as to types of accommodations that would be allowed for each test. Districts were invited to submit requests for additional types of accommodations for CDE's advice and consent. The CDE reviewed these requests and issued additional clarifications about changes to the exam that were judged to alter the construct being measured and thus had to be considered as a "modification" rather than an accommodation. The difference is that modifications invalidate the resulting scores, although students can apply for a waiver if the student receives a score equivalent to passing and there is other evidence of mastery of the required skills. A court ruling, just before the March administration, required districts to notify all parents of students with disabilities that their child was entitled to any accommodation specified in their IEP or Section 504 Plan, although some changes might invalidate the score. Because there was limited time for a more extended dialogue with parents about these options, there may actually have been increased confusion in the short run about the types of adaptations students should be allowed or encouraged to have.

Currently, the state collects little or no specific information about the IEPs of students receiving testing accommodations or modifications. At the very least, it would be useful to document the nature of IEPs that require something beyond the standard available methods of accommodation. Further, better guidance on the use of the standard accommodations could be provided if more information about the IEPs of students requiring some form of accommodation were available.

Specific Recommendation 4: ETS should follow up on (a) specific test question issues identified in our item review workshops and (b) specific suggestions for improving their new scoring process from our review of their current online training.

In Chapter 2, we summarized a number of specific written and verbal comments from participants in our item review panels. More detailed information on specific test questions is being provided to ETS for consideration in revising their item development and review processes. The issues identified include specific examples of ways in which students who have mastered the target standard might fail to answer correctly (e.g., misunderstanding the language of a math problem) or students who have not mastered the standard might still be led to the correct answer (backdoor solutions). It may be possible to derive more general principles for item writers from these more specific concerns.

Similarly, we included a number of specific suggestions for the training of essay scorers. The ETS process for scoring the essays is innovative and potentially very cost effective, but it is also new. We did not see significant improvements in scorer consistency from the first application of this newer approach. With continued refinement of training and monitoring procedures, we would expect more noticeable improvements in subsequent years.

In making each of the above recommendations, we recognize the provisional nature of the data available at this time. We also commend the CDE for the extensive efforts that have already been made to improve the program in response to these and earlier suggestions.